

## **Construction Management and Engineering Competency 2.9**

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**Competency 2.9** Construction management and engineering personnel shall demonstrate a familiarity level knowledge of the Occupational Safety and Health Act (OSHA) requirements in the following chapters of the Code of Federal Regulations:

- 29 CFR 1910, Occupational Safety and Health Standards
- 29 CFR 1926, Safety and Health Regulations for Construction

### **1. Supporting Knowledge and Skills**

- a. Discuss how the Occupational Safety and Health Act applies to and impacts Department construction projects.
- b. Identify the requirements in the Occupational Safety and Health Act that form the basis of authority for construction management personnel in the oversight and management of construction projects.
- c. Discuss the basic requirements in the listed documents for each of the following areas associated with construction projects:
  - Personal protective equipment (PPE)
  - Electrical safety
  - Safety hazards associated with welding
  - Safety hazards associated with materials handling and storage
  - Safety hazards associated with machinery
  - Safety hazards associated with portable and hand tools
  - Safety hazards associated with concrete and masonry
  - Safety hazards associated with scaffolding
- d. Discuss the responsibilities of the construction manager in ensuring compliance with Occupational Safety and Health Act requirements.
- e. Describe the actions to be taken to correct a deficiency with the requirements of the listed documents.
- f. Develop an assessment plan for inspection of construction activities and the construction site for compliance with Occupational Safety and Health Act requirements.

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### 2. Self-Study Activities (corresponding to the intent of the above competency)

Below are two web sites containing many of the references you may need.

Web Sites		
Organization	Site Location	Notes
Department of Energy	<a href="http://wastenot.inel.gov/cted/stdguido.html">http://wastenot.inel.gov/cted/stdguido.html</a>	DOE Standards, Guides, and Orders
OSHA	<a href="http://www.osha-slc.gov/">http://www.osha-slc.gov/</a>	OSHA documents and search engine
U.S. House of Representatives	<a href="http://law.house.gov/cfr.htm">http://law.house.gov/cfr.htm</a>	Searchable Code of Federal Regulations

**Read** the summary section below.

**Scan** each of the following references for familiarization.

- 29 CFR 1910, *Occupational Safety and Health Standards*
- 29 CFR 1926, *Safety and Health Regulations for Construction*

EXERCISE 2.9-A Discuss how the Occupational Safety and Health Act applies to and impacts Department construction projects.

EXERCISE 2.9-B Identify the requirements in the Occupational Safety and Health Act that form the basis of authority for construction management personnel in the oversight and management of construction projects.

EXERCISE 2.9-C Using 29 CFR 1926 as a reference, locate the basic requirements for each of the three following areas associated with construction projects:

- Personal protective equipment (PPE)
- Electrical safety
- Safety hazards associated with welding

EXERCISE 2.9-D Using 29 CFR 1926 as a reference, discuss the accident prevention related responsibilities of the construction manager in ensuring compliance with Occupational Safety and Health Act requirements.

EXERCISE 2.9-E While referring to 29 CFR 1910, describe the actions necessary to revise 29 CFR 1910 or 29 CFR 1926.

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**Review** “Safety and Health Regulations for Construction,” Subpart K, “Electrical,” 29 CFR 1926, *Surveillance Guide*, prepared by the DOE Oak Ridge Field Office.

EXERCISE 2.9-F    Develop an assessment plan for inspection of construction activities and the construction site for compliance with Occupational Safety and Health Act requirements.

### 3. Summary

#### OSHA Impact On Construction Projects

The OSHA has a definite impact on DOE construction projects. The act states that contractors cannot require work to occur in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to the worker's health and safety. It impacts construction projects by requiring employers to establish an occupational safety and health program in accordance with OSHA and DOE requirements.

#### OSHA-Related Authority

The OSHA contains a requirement that forms the basis of authority for construction management personnel in the oversight and management of construction projects. 29 CFR 1926.3 relates that requirement:

“It shall be a condition of each contract that is subject to section 107 of the *Contract Work Hours and Safety Standards Act* that the Secretary of Labor or any authorized representative shall have the right of entry to any site of contract performance for the following purposes:

- To inspect or investigate the matter of compliance with the safety and health standards contained in Subpart C of this part and following subparts; and
- To carry out the duties of the Secretary under section 107(b) of the act.

For the purpose of carrying out his investigative duties under the Act, the Secretary of Labor may, by agreement, use with or without reimbursement the services, personnel, and facilities of any state or federal agency. Any agreements with states under this section shall be similar to those provided for under the *Walsh-Healy Public Contracts Act* under 41 CFR part 50-205.”

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### Basic Safety Hazard Requirements

The following table relates the basic requirements from 29 CFR 1926 regarding selected areas associated with construction projects.

<b>Some Safety Hazard-Related Requirements of 29 CFR 1926</b>	
<b>Area</b>	<b>Requirement Section</b>
Personal Protective Equipment (PPE)	1926.28 & 1926.95-.107
Electrical Safety	1926.400 - 1926.453 & 1926.950-.960
Safety Hazards Associated with Welding	1926.350 - 1926.354
Safety Hazards Associated with Materials Handling & Storage	1926.250 - 1926.252 & 1926.953
Safety Hazards Associated with Machinery	1926.952
Safety Hazards Associated with Portable & Hand Tools	1926.300 - 1926.307
Safety Hazards Associated with Concrete and Masonry	1926.700 - 1926.706 & 1926.854
Safety Hazards Associated with Scaffolding	1926.450 - 1926.453

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### Construction Management Responsibilities

The following table relates some of the basic responsibilities that 29 CFR 1926 places on the construction manager. The reference for each is indicated. However, for sake of brevity, the requirements are paraphrased.

<b>Construction Manager Responsibilities</b>	
<b>Area</b>	<b>Requirement</b>
Prime Contractor Obligations	The prime contractor assumes all obligations prescribed as employer obligations under the standards contained in this part, whether or not he subcontracts any part of the work. (29 CFR 1926.16(b))
Requiring Work In Unsafe Conditions	No contractor or subcontractor shall require any worker to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health or safety. (29 CFR 1926.20(a))
Accident Prevention	<ul style="list-style-type: none"><li>• It shall be the responsibility of the employer to initiate and maintain occupational safety and health programs.</li><li>• These programs shall provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by the employers.</li><li>• The use of any tool or equipment that is not in compliance with OSHA requirements is prohibited. The tool or equipment shall either be identified as unsafe by tagging or locking the controls to render it inoperable or shall be physically removed from its place of operation.</li><li>• The employer shall permit only those employees qualified by training or experience to operate equipment and machinery. (29 CFR 1926.20)</li></ul>

### Revising The Act

Title 29 CFR 1910.3 states that any interested person may petition in writing the Assistant Secretary of Labor to promulgate, modify, or revoke a standard. The petition should set forth the terms or the substance of the rule desired, the effects thereof if promulgated, and the reasons therefore.

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### Assessment Plans

An assessment plan for inspection of construction activities can be a useful tool. It is beyond the scope of this self study guide to cover this item in detail. A subject matter expert at your site should be consulted for review of this item. One reference that provides assistance and an actual assessment plan is the “Safety and Health Regulations for Construction,” Subpart K, “Electrical,” 29 CFR 1926, *Surveillance Guide*, prepared by the DOE Oak Ridge Field Office.

#### 4. Exercise Solutions

EXERCISE 2.9-A Discuss how the Occupational Safety and Health Act applies to and impacts Department construction projects.

ANSWER 2.9-A The act states that contractors cannot require work to occur in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to the worker's health and safety. It impacts construction projects by requiring employers to establish an occupational safety and health program in accordance with OSHA and DOE requirements.

EXERCISE 2.9-B Identify the requirements in the Occupational Safety and Health Act that form the basis of authority for construction management personnel in the oversight and management of construction projects.

ANSWER 2.9-B “It shall be a condition of each contract that is subject to section 107 of the *Contract Work Hours and Safety Standards Act* that the Secretary of Labor or any authorized representative shall have the right of entry to any site of contract performance for the following purposes:

- To inspect or investigate the matter of compliance with the safety and health standards contained in Subpart C of this part and following subparts; and
- To carry out the duties of the Secretary under section 107(b) of the act.

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For the purpose of carrying out his investigative duties under the Act, the Secretary of Labor may, by agreement, use with or without reimbursement the services, personnel, and facilities of any state or federal agency. Any agreements with States under this section shall be similar to those provided for under the *Walsh-Healy Public Contracts Act* under 41 CFR part 50-205.” (29 CFR 1926.3)

- EXERCISE 2.9-C Using 29 CFR 1926 as a reference, locate the basic requirements for each of the following three areas associated with construction projects.
- Personal protective equipment (PPE)
  - Electrical safety
  - Safety hazards associated with welding

ANSWER 2.9-C The following table identifies the basic requirements from 29 CFR 1926 regarding selected areas associated with construction projects.

Some Safety Hazard-Related Requirements of 29 CFR 1926	
Area	Requirement Section
Personal Protective Equipment (PPE)	1926.28 & 1926.95-.107
Electrical Safety	1926.400 - 1926.453 & 1926.950-960
Safety Hazards Associated with Welding	1926.350 - 1926.354

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EXERCISE 2.9-D Using 29 CFR 1926 as a reference, discuss the accident prevention related responsibilities of the construction manager in ensuring compliance with *Occupational Safety and Health Act* requirements.

ANSWER 2.9-D The following table relates some of the basic responsibilities that 29 CFR 1926 places on the construction manager. The reference for each is indicated. However, for sake of brevity, the requirements are paraphrased.

Construction Manager Responsibilities	
Area	Requirement
Accident Prevention	<ul style="list-style-type: none"> <li>• It shall be the responsibility of the employer to initiate and maintain occupational safety and health programs.</li> <li>• These programs shall provide for frequent and regular inspections of the job sites, materials, and equipment to be made by competent persons designated by the employers.</li> <li>• The use of any tool or equipment that is not in compliance with OSHA requirements is prohibited. The tool or equipment shall either be identified as unsafe by tagging or locking the controls to render it inoperable or shall be physically removed from its place of operation.</li> <li>• The employer shall permit only those employees qualified by training or experience to operate equipment and machinery. (29 CFR 1926.20)</li> </ul>

EXERCISE 2.9-E While referring to 29 CFR 1910, describe the actions necessary to revise 29 CFR 1910 or 29 CFR 1926.

ANSWER 2.9-E Any interested person may petition in writing the Assistant Secretary of Labor to promulgate, modify, or revoke a standard. The petition should set forth the terms or the substance of the rule desired, the effects thereof if promulgated, and the reasons therefore. (29 CFR 1910.3)

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EXERCISE 2.9-F Develop an assessment plan for inspection of construction activities and the construction site for compliance with Occupational Safety and Health Act requirements.

ANSWER 2.9-F An assessment plan for inspection of construction activities can be a useful tool. It is beyond the scope of this self-study guide to cover this item in detail. A subject matter expert at your site should be consulted for review of this item. One reference that provides assistance and an actual assessment plan is the "Safety and Health Regulations for Construction," Subpart K, "Electrical," 29 CFR 1926, *Surveillance Guide*, prepared by the DOE Oak Ridge Field Office.